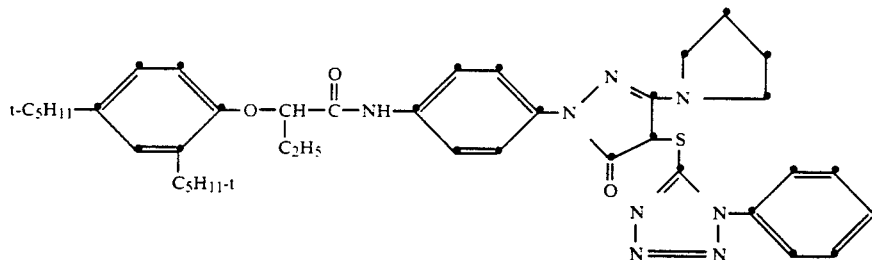


-continued

S-6



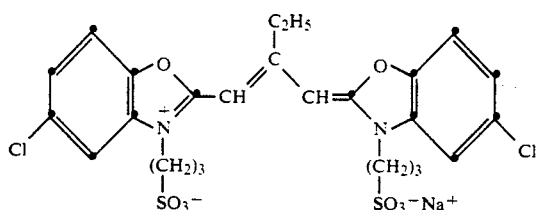
After drying, the coatings were exposed sensitometrically to a 5500° K. tungsten lamp for 1/50 second through a Kodak Wratten 9 filter (Kodak and Wratten are trademarks of Eastman Kodak Co., U.S.A.) and through a step tablet ranging from 0 to 4 optical density units. After processing the exposed coatings in the C-41 process, the logarithms of the relative speeds were measured at 0.15 optical density units above fog. The results given below show the effect of the novel gold (I) compounds in combination with a sulfur sensitizer over and above the effect of the sulfur sensitizer alone.

TABLE III

Sensitizers (per mole Ag)	Log Relative Speed (Fog)
None (control)	1.00 (0.05)
5.5 mg S-4 (Comparison)	2.25 (0.16)
5.5 mg S-4, 3.75 mg compound I (Invention)	3.10 (0.11)

PHOTOGRAPHIC EXAMPLE 4:

Photographic silver bromide tabular grain emulsions containing silver bromide crystals having an average circular diameter of 2.1 microns and a thickness of 0.13 microns and containing 40 g gelatin per mole Ag are spectrally and chemically sensitized by the following procedure. 150 mg NaSCN and 400 mg/Ag mol of the green spectral sensitizing dye having structure S-7 were added to each emulsion at 40° C.



The finish modifier anhydro-5,6-dimethoxy-3(3-sulfo-propyl)benzothiazolium was added at a level of 20 mg/mole Ag. KSeCN at a level of 0.45 mg/mole Ag and the other chemical sensitizers indicated in Table IV were added. Then the temperature was raised to 60° C. and held 60 minutes. After cooling to 40° C., 300 mg KI was added. The emulsions were then coated on film support at 210 mg Ag and 265 mg gelatin per ft² with a gelatin hardener. Two layers of a protective overcoat containing 42 mg gelatin per ft² were applied. The dried coatings were exposed sensitometrically for 1/50 second to a 2850K tungsten lamp through a Corning Filter No. 40-10 and through a step tablet ranging in optical density from 0 to 4. The exposed coatings were then processed in the standard Kodak Xomat process. The logarithms of the relative speeds were determined at 1.0 optical density above fog. In addition, the following test

was carried out to measure the sensitivity to red safelights. From the sensitometric data previously obtained for the tungsten exposures through the Corning 40-10 Filter, the exposure necessary to produce an optical density of 0.60 above fog was determined. This exposure was first applied to the coatings. Next, half of each coating was masked off to prevent any further exposure and then each strip was subjected to an additional red safelight exposure for 8 minutes which was produced by placing a 15 watt incandescent bulb and a GBX filter 48 inches from the coatings. The coatings were processed as before. The difference in optical density between that part of the coating which was additionally exposed to the safelight and that part which was not, constitutes a measure of the safelight response. The sensitometric results are listed in Table IV.

TABLE IV

Sensitizer	Log Rel. Speed	Contrast	Safelight Response
5 mg Na ₃ Au(S ₂ O ₃) ₂ —2H ₂ O (Comparison)	1.00	2.77	0.12
2.4 mg Na ₂ S ₂ O ₃ —5H ₂ O.	1.02	2.94	0.02
5.5 mg compound I (Invention)			

It is seen from this data that a compound of the present invention used in combination with one molar equivalent of sulfur sensitizer results in a lower sensitivity to red safelight and a higher contrast compared to sensitization with an amount of aurous dithiosulfate which is equivalent in number of moles of gold but which inherently contains two molar equivalents of S sensitizer.

PHOTOGRAPHIC EXAMPLE 5:

Silver chloride emulsions containing cubic grains with an average edge length of 0.63 micron, which were made in the presence of thioether silver halide ripeners of the type described in McBride U.S. Pat. No. 3,271,157 and containing 40 g gelatin per Ag mole were chemically and spectrally sensitized in the following manner. The chemical sensitizers listed in Table V were added to the emulsion samples at 40° C. Then the temperature was raised to 60° C. and held 20 minutes. 250 mg/Ag mole of a blue spectral sensitizing dye having structure S-8 was added. The emulsion samples were then doctored with 92 mg/mole Ag of the anti-foggant 1-(3-acetamidophenyl)-5-mercaptotetrazole sodium salt and 218 mg KBr/mole Ag. The emulsions were coated on paper support at 26 mg Ag/ft² and 144 mg gelatin/ft² with 100 mg per mole Ag of a yellow color-forming coupler having the structure S-9. An overcoat containing 100 mg gelatin/ft² was applied with a hardener.